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Bob Evans offered the use of the Mobile Home park meeting room for the "cut and paste" secession. This seemed to be the most suitable place available to us. Details will be worked out at the next meeting as to time and work crews.

Rod mentioned that the 34 character width per column looked good as it produced symmetrical right and left columns.

The printing trade seems to use a device called a waxer to hold the pasted strips to a main sheet. Jack volunteered to investigate the utility of this device as he has one. We need to make sure the wax will not affect the printing in any way.

As there was no new business the meeting adjourned at 8:50 PM.

Dick Wagner
Secretary

BITS & BYTES

by: Rod Gowen

In this column I try to bring you the latest and complete information and news available to me regarding the world of TS computing. One way that I can accomplish this is if I have the support of you, the reader, in collecting news that may be of interest to other readers. If you have any news, rumors or other tidbits of information that fits this description, why not send it along? We will be watching!

BEST OF THE PLOTTER UPDATE!

We are still working toward completion on the book. Due to fewer folks available to help on the project, it looks as though the first issues will not be in print until late October at the earliest. We have apparently bitten off a rather large bite and it is taking more time than we thought to get it chewed up. We will keep you posted as to progress.

MEETING TIME CHANGE---

For the next 2 months we will be meeting on the 3rd Friday instead of the second Friday. Same time and

place, just a week later than usual. In November we move back to the 2nd Friday (if I don't forget to book the room!). The reason for the change is to space the meetings out to 4 weeks apart. Hope it's no problem for those of you who want to attend.

DO YOU WANT A NEWSLETTER?---

This seems a fair question to me. What is it you are getting from this publication? Do you find it useful? Do you enjoy reading it each month? Do you look forward to receiving it? Do you contribute to it? WHAT!?! You DON'T? WHY NOT? If you say you cannot contribute anything then I can only assume that you never use your computer, that you have never run a piece of software or even read a book or a magazine. If you have never done any of these things, then you certainly have nothing to contribute. If, however, you have done even one of these things, then you can sit down and write a short review or article that you can send in to have published! Otherwise, I am afraid that our editor will do the same as so many other editors have done and just throw in the towel. I don't mind writing a couple of things each month for the newsletter and neither does Dick, but we certainly do not enjoy having to come up with 6 pages of information each month. One alternative to stopping publication altogether is to cut back to a 4 page newsletter unless the material is available. I intend to put it to a vote to do just that at the next meeting unless we start to receive contributions.

ANOTHER OLD FRIEND HEARD FROM!--

Remember Michael Carver? Seems like quite a while since any of us had heard from him. He phoned me a couple of weeks ago and it seems that he has to move out of the house where he has been living and he wanted to sell off all of his TS gear. I now have it all for sale on consignment. As you know, he was VERY active in the TS community for quite a few years. He collected a LOT of Spectrum software and quite a number of books for the 2068 and the QL. If anyone is interested in what

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he has to sell, all it takes is 12 legal sized (#9 or 10) S.A.S.E.s to get on the mailing list from RMG! Mike also said that he might stop by one of our regular meetings if he can find the time.

MIKE DE SOSA BACK ON THE QL--

You remember Mike de Sosa? He wrote the book "Taking The Quantum Leap" for QL users. He was marketing it through Time Designs but when TD dropped off the face of the earth, he has been unable to regain control of the book. RMG would love to be able to sell it if it were available. Mike could love to collect back royalties if he could. In any case, Mike is back working on the QL while recuperating from recent surgery. He phone me up last week to see what was new and exciting for the QL and to tell me that he had received some new software from an old friend of his. We will keep you posted as to whether it is something that will be marketed or not. It is sure good to know that not all of our old friends are out of the TS world for good!

That's it for now!

See you next time. . .

TELECOMMUTING

This article is a reprint of PCs On The Network: Telecommuting's Time Has Come that was printed in the December 1991 issue of Rural Voice of the Canby (Oregon) Telephone Association. This is a coop system with about 7000 members serving a rural area in Oregon.

It probably comes as no surprise to learn that telecommuting, or working at home through the use of modern telecommunication technology, is quietly becoming the way more and more Americans earn their paychecks. It might not even be a surprise to discover that primary growth markets for telecommuting have, until now, been primarily urban and suburban areas.

What might surprise you though, is that by utilizing the digital switching technology small telephone companies make available to their subscribers, many rural commuters could become telecommuters. Keeping in mind that, according to one government report, nation-wide more than 90 percent of the phone lines serviced by independent telcos are controlled by digital switching equipment while just 50 percent of those served by the large Bell companies can boast the same state-of-the-art technology. It is important to note that telecommuting is only made possible by that digital technology. As a result of this 'technology gap' many employers are moving or expanding their businesses into rural areas that would have been overlooked just a few short years ago.

Simply put, telecommuting consists of working from your home via electronics and telecommunications devices. Employing modems, second phone lines, Cancel Call Waiting, high speed digital and data capabilities, and personal computers telecommuters gain the advantage of working at home while employers experience increased productivity and less absenteeism.

In a recent survey, the New York-based research firm Link Resouces reported that nearly six million Americans are currently telecommuting at least one day each week. Other estimates claim that as much as forty percent of the nation's work force will be telecommuting to one degree or another as early as 1994.

Even Congress has recognized the importance of the role telecommuting is playing, and will continue to play, in the economic well being of the nation. In September, they passed an ammendment to the 1992 Transportation Department appropriations bill calling for studies by the Energy and Transportation departments on the impact telecommuting would have on gas use, pollution, highway deaths and the general economy.

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It should come as no surprise that telephone companies, from multi-national giants to smaller, local companies just like ours, are leading the way towards this new revolution in the workplace.

Companies and government agencies of all sizes are encouraging telecommuting for a number of reasons. Many employers cite increased productivity, lack of distractions, increased hiring of the handicapped and semi-retired, and less absenteeism as among the reasons they support telecommuting. And telecommuting doesn't benefit just the company.

Telecommuters themselves say that less stress - due to less commuting time - lower food, gas, vehicle maintenance and dry cleaning costs all add up to strong reasons to encourage telecommuting. Other electronic commuters point out that there is also more control over their product when working at home. Since there is also less pre-work personal preparation time and no time loss due to commuting, they can start work earlier and stay better focused during the day, they add.

There are also environmental concerns to take into account. One study, performed earlier this year by the Arthur D. Little organization, estimates that substituting telecommuting to and from work can potentially eliminate 1.8 million tons of vehicle-produced pollutants, save 3.5 billion gallons of gasoline and reduce maintenance costs for existing vehicle transportation by nearly half a billion dollars nationwide over just a one year period.

There are those occupations that do not lend themselves to telecommuting, most enthusiasts agree. Many occupations, however, especially those already computer-oriented professions such as engineering, and the mathematical sciences - biology, chemistry, etc. - lend themselves easily to telecommuting.

By far the most common applications of telecommuting are more mundane. To a large extent electronic commuting finds its greatest applications among managers, executives and sundry other professionals including attorneys, CPA's and communications, marketing and graphic design specialists.

Telecommuting has also turned into a valuable tool in spurring economic growth and development. In many rural communities, the local telephone company's ability to provide the latest in telecommunications capability and access to the global marketplace has either kept local businesses from relocating or entice new business into the area. Another option, satellite or 'hub and spoke' operations, are also becoming more popular. Often, because of the ready labor force and active encouragement from local business and institutions, manufacturing and service companies set up portions of their operations through telecommuting from an outlying rural location to a more centrally located headquarters. This option has proven particularly well suited to telemarketing and consumer survey companies.

It is evident that telecommuting is not only here to stay, but likely to continue growing in popularity as well.

INPUT !

Dick F. Wagner

After receiving Mr. Pegram's letter (last issue) on how to have more than one INPUT statement on one line, I did a bit of experimenting with his program. By the time I had finished I began to recall that I had a copy of an article on this subject. A search through my files of magazine articles brought up Robert Hartung's article on the subject in the CTM magazine, November 1985. CTM magazine has been laid to rest for some years now so the best way to give you his expertise is to copy that part of the article that pertains to INPUT.

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"When I got my TS2068, I found even a simple thing like an INPUT command has some surprises. Of course I was pleased to find out that while the manual doesn't say anything about multiple-INPUT lines when it tells about using multiple-statement lines, any legitimate command preceded by a colon may follow another on the same line. Some statements, such as a REM or GO TO or IF-THEN, will not allow the processing of statements following so should be the last one on a line. The exception is if an IF-THEN condition is met that does not call for a branch to another line, ex. g:

```
IF X THEN INPUT A(n): LET C=C+1
```

"This is interpreted: if X is not equal to 0 then INPUT A(n) and increment C, and if X=0 then skip this INPUT and the increment of C and go on to the next line. This is very useful but requires that all statements following the IF-THEN on this line be dependent on its condition(s) being met.

"Multiple-INPUTs with their respective prompts may also be used on a single line when separated by a semi-colon, comma, or apostrophe instead of a colon. This has the advantage of being able to see all of the inputs of a series at the time they are entered without cluttering up the working display on the screen. As in a PRINT line, temporary attributes of INK, PAPER, FLASH, as well as TAB n may be used for emphasis in a prompt if followed by a semicolon, comma, or apostrophe.

"Some PC's, such as the C-64, provide for an automatic numbering of inputs made in a FOR-NEXT loop. On the 2068, if we try something like FOR N=1 TO 5: INPUT n,A: NEXT N we find that both the n and the A are interpreted as requiring an INPUT. However, if we change this to FOR N=1 TO 5: INPUT STR\$ n,A:NEXT n now we have as a prompt the current value of the loop variable n.

"But how about using a string in a prompt which is used for several different inputs? If we try INPUT A\$,X this again is interpreted as calling for inputs for both A\$ and X. What to do? While I was looking through a listing for the Spectrum in a ZX Computing magazine one day, I saw that the INPUT prompts contained both variable and string names enclosed in parentheses, so I tried this on my TS2068. Viola! it seems the Spectrum manual describes this as standard procedure but somehow it got lost in the translation to the colonies by Timex.

"I have tried to put this in the following demo. It also includes a way of aborting a numeric input without changing the stored value (assuming that a letter o is not used as a variable name, which is not good practice anyway). The poke in line 70 provides automatic scrolling when the screen display is filled. Note also that when the ON ERR function is activated, at some point the program should pass through an ON ERR RESET to avoid creating a monster that eats up STOPs and BREAKs as errors and keeps right on going!

"When you begin adding peripherals to your computer, the INPUT command from the computer to the device, or vice versa, may also follow the formats described above, including multiple statements. A command such as INPUT # s,v will be read as an input of variable v into the I/O stream # s and will thus equate the device at this I/O port with the computer's own built-in hardware.

Robert D. Hartung

Addendum: A recent communication from Bob adds this additional bit of information:

"The above N loop example could also be written using INPUT (n),A instead of INPUT STR\$ n,A. To input a string definition without displaying the bracketing quotes, something like this may be used--INPUT LINE a\$.

the plotter

pc page

by: Rod Gowen

Hope no one minds, but I am going to turn this space over to Dick Wagner this month. This will give me some time to get some other work done and will allow Dick to use some material he may have been saving for this column. I will be back as soon as possible. Take it away Dick!

SCREEN DUMP

Dick Wagner

As GWBASIC does not provide for a screen dump like PRINT SCN, a GWBASIC program to do this can be handy to have. This program is from an unknown source as I failed to document its origin.

First of all, the demo part of the program displays a rectangle with some inner graphics, 2 small circles and one large circle plus a mark at the lower left corner. When this image is printed it is turned 90 degrees clockwise so the rectangle will come close to filling a page when printed. In this form the circles are elongated, corresponding to the screen width. I tried changing the printer graphic line 10170 to a symetrical pitch of 1/72 each way with better results. It will take some experimenting to obtain a reasonable circle.

Line 10070 bothered me as it added a line space for each line. The solution was to delete the semicolon at the end of the line. Try it either way and see how it goes.

Lines 10220-10270 are not a part of the program. They were added to explain how I solved the right margin printing problem. This short program was run first to set up the printer. Low line numbers were used so it could be run first, then RUN 100- ran the main program. As I recall, it was necessary to run the printer set up each time because the printer was reset after the screen dump was run.

This gives the GWBASIC/BASICA users a handy tool for screen dumps, and the short printer setup is one way to use your own program to make LLIST work for any margins desired. Line 10230 is the printer coding for left margin for Epson type printers while line 10240 is how to use the WIDTH command out the LPT1 port for a line length of 64 characters.

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```
100 ' DRAW TEST DATA AND CALL SUBROUTINE FOR IBM/EPSON PRINTERS
110 SCREEN 2: KEY OFF: CLS
120 CIRCLE (300,100),50: CIRCLE (20,20),10: CIRCLE (600,20),10
123 LINE (5,195)-(5,190): LINE (0,195)-(10,195)
125 LINE (0,0)-(639,0): LINE -(639,199): LINE -(0,199): LINE -(0,0)
130 GOSUB 10000
140 GOTO 140
150 CLOSE #1
10000 ' SUBROUTINE TO DUMP GRAPHICS SCREEN TYPE 2 (640 X 200) MO
NO
10010 DEF SEG=&HB800 'print to graphics screen
10020 OPEN "lpt1:" AS #1 'open printer
10030 WIDTH "lpt1:",255 'inhibit auto new line
10040 PRINT #1,CHR$(27);"1"; 'set 7/72 inch line spacing
10050 FOR BYTEND=0 TO 79 '80 bytes = 640 points
10060 START=80*199+192+BYTEND 'bottom left corner
10070 PRINT#1,CHR$(13);CHR$(10); 'carriage return, line feed
10080 BYTES=START 'initialize working pointer
10090 GOSUB 10160 'start line
10100 GOSUB 10190 'print dot column
10110 IF BYTES>=0 AND BYTES<80 THEN 10140 'test for last dot co
l
10120 IF BYTES <8000 THEN BYTES=BYTES+8112 ELSE BYTES=BYTES-8192
10130 GOTO 10100 'loop
10140 NEXT BYTEND 'next 8 points
10150 RETURN 'return from subroutine
10160 'SUBROUTINE TO START GRAPHICS LINE
10170 PRINT #1,CHR$(27);"K";CHR$(144);CHR$(1); '400 dot column
10180 RETURN
10190 'SUBROUTINE TO PRINT ONE DOT COLUMN
10200 PRINT#1,CHR$(PEEK(BYTES));CHR$(0);
10210 RETURN
```

10220 REM TO OBTAIN A MARGIN ON EACH SIDE OF THE LISTING I USED
THE PRINTER COMMAND FOR LEFT MARGIN OF 8, AND THE WIDTH STATEMEN
T LIKE THIS:

```
10230 REM LPRINT CHR$(27)"1"CHR$(8);
10240 REM WIDTH "LPT1",64
10250 REM OPEN "LPT1:" FOR OUTPUT #1
10260 REM LPRINT CHR$(10);
10270 REM THIS GOT AROUND THE FAILURE OF THE PRINTER USING A RIG
HT MARGIN COMMAND FOR LLIST.
```


-NOTICE-

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```
1 LET C$="Key ENTER to retain
A$ as:"
2 LET a$="Original A$ content
s"
3 DIM D(5)
4 DIM E$(5,32)
10 FOR N=1 TO 5
20 LET D(n)=n: LET E$(n)=STR$
n
30 INPUT (C$),(A$)'B$: IF B$<>
"" THEN LET A$=B$
40 ON ERR GO TO 50: INPUT "Ent
er letter "; FLASH 1;"o "; FLASH
0;"to retain loop value ";(D(
n));" for D(";(n);")",D(n)
50 ON ERR RESET
60 INPUT TAB 8; INK 4;"For loo
p no. ";STR$ n'"Key ENTER to re
tain loop value STR$ """;(E$(n,
TO LEN STR$ n));"" in array E$
(n)",B$: IF B$<>"" THEN LET E$(n
)=B$
70 POKE 23692,-1: PRINT "VALUE
S FOR LOOP ";n'"A$= ";A$'"D(";n;
")=";D(n)'"E$(";n;")=";E$(n)
80 NEXT n
```

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